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[54] **PERSONAL COMMUNICATIONS TERMINAL HAVING SWITCHES WHICH INDEPENDENTLY ENERGIZE A MOBILE TELEPHONE AND A PERSONAL DIGITAL ASSISTANT**

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[58] **Field of Search** 379/58, 59, 96, 379/98, 100; 455/33.1, 403, 556, 557, 553, 566, 572, 575

[56] **References Cited****U.S. PATENT DOCUMENTS**

4,972,457	11/1990	O'Sullivan	379/59
5,475,866	12/1995	Ruthenberg	455/33.1
5,479,479	12/1995	Braitberg et al.	379/59
5,522,089	5/1996	Kikinis et al.	379/96
5,572,573	11/1996	Sylvan et al.	379/58
5,581,261	12/1996	Hickman et al.	455/33.1
5,584,054	12/1996	Tyneski et al.	379/58

FOREIGN PATENT DOCUMENTS

0 472 361 A2	8/1991	European Pat. Off.
0 651 544 A2	10/1994	European Pat. Off.
WO 90/03076	3/1990	WIPO
WO 96/38970	12/1996	WIPO

OTHER PUBLICATIONS

Yvonne L. Lee; "Is it a phone or a PDA? Here's what Simon says"; *Infoworld Magazine*; Sep. 26, 1994; p. 124.
Steve Mann; "Searching for the Perfect PDA"; *Wireless For the Corporate User Magazine*; vol. 3, No. 6, 1994.

Andy Reis . . .; "EO's Personal Communicator Ushers in a New Era"; *BYTE Magazine*; Mar. 1993, p. 52.

ARDIS advertisement; ARDIS Company; 1994.

Smith Corona HandiFax catalog listing; 1994.

Steven B. Weisman; "PDAs Today: Technology Trends and Market Dynamics"; *BIS Strategic Decisions*; Dec. 1992.

"Mitsubishi handheld combines cellular phone, electronic organizer"; *PC Week Magazine*; Nov. 7, 1994; p. 57.

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[57] **ABSTRACT**

A personal communications terminal (PCT) in a case having a first half hingedly connected to a second half. The PCT operates in an open and a closed position and comprises a mobile telephone unit and a personal digital assistant (PDA) unit electronically connected to the mobile telephone unit. The PDA unit is a fully functional personal computer. The PDA unit comprises a memory for application software programs, a memory for data, a processor for performing operations with the data and the application programs, a modem for passing data between the PDA unit and the mobile telephone unit, and a mobile data interface for passing data between the PDA unit and the mobile telephone unit without utilizing the modem. When the PCT is in the open position, it forms two interior faces which include a PDA display screen on one face and a full alpha-numeric keyboard on the other face. The PCT may be operated as a standard wireless telephone, as a personal computer, or in an integrated mode for FAX, wireless data transfer, or sending and receiving short message service (SMS) messages.

22 Claims, 4 Drawing Sheets

